

**REMARKS**

This Amendment and Response to Non-Final Office Action is being submitted in response to the non-final Office Action mailed April 27, 2007. Claims 1-22 are pending in the Application. Claims 1, 5, and 9 are the independent claims.

Claims 1-22 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claims 1-22 again stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claims 1-4, 12-14, and 20 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claims 5-8, 15-16, and 21 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Claims 1-2, 12-14, and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Juniper ("Juniper Networks M40 Internet Backbone Router Inter-Operating With the CIENA MultiWave Sentry DWDM System") in view of the admitted prior art, Waschka, Jr. (U.S. Patent No. 4,449,247), Bach *et al.* (U.S. Patent No. 6,606,354), and Hoogerbrugge ("Optimizing test strategies for SONET/SDH/ATM network element manufacturing").

Claims 3-11, 15-19, and 21-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Juniper in view of the admitted prior art, Waschka, Jr., Bach, and Hoogerbrugge as applied to Claim 1, and in further view of Bullock *et al.* (U.S. Patent No. 5,764,651).

In response to these rejections, Claims 1, 5, and 9 have been amended herein to further clarify the subject matter which Applicants regard as their invention, without prejudice or disclaimer to continued examination on the merits. These amendments are fully supported in the Specification, Drawings, and Claims of the Application and no new matter has been added. Based upon the amendments, reconsideration of the Application is respectfully requested, without further search, in view of the following remarks.

**Rejection of Claims 1-22 - 35 U.S.C. 112, First Paragraph:**

Claims 1-22 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Examiner states the limitation of “wherein each performance monitor actively monitors bit error rate status” in independent Claims 1, 5, and 9 is not disclosed in the specification. Specifically, Examiner states that monitoring bit errors is disclosed, but not a bit error rate status, per se.<sup>1</sup>

In response to this rejection Applicants have amended independent Claims 1, 5, and 9 to “bit errors” from “bit error rate status.” Therefore, Applicants respectfully submit that the rejection of Claims 1-22 under 35 U.S.C. 112, first paragraph, has now been overcome and respectfully request that this rejection be withdrawn.

**2<sup>nd</sup> Rejection of Claims 1-22 - 35 U.S.C. 112, Second Paragraph:**

Claims 1-22 again stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Examiner states the limitation of “wherein the faulty communication channel is identified without selective interrogation and sequential testing of the optical transmitters and the optical receivers” is a negative limitation without description in the specification.<sup>2</sup>

In response to this rejection, Applicants have amended independent Claims 1, 5, and 9 to change “identified without selective interrogation and sequential testing” to “identified responsive to simultaneous testing.” This is described in the specification, such as, for example, on page 14, lines 1-10. Therefore, Applicants respectfully submit that the

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<sup>1</sup> Non-Final OA, April 27, 2007, p. 2

<sup>2</sup> Non-Final OA, April 27, 2007, p. 3

second rejection of Claims 1-22 under 35 U.S.C. 112, first paragraph, has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 1-4, 12-14, and 20 - 35 U.S.C. 112, First Paragraph:**

Claims 1-4, 12-14, and 20 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Examiner states that the performance monitor plays a role in signal quality determination, but the diagnostics analyzer performs the identification. Specifically, Examiner suggests changing the “as determined by” language to “monitoring...is associated with.”<sup>3</sup> Specifically, Applicants have amended independent Claim 1 per Examiner’s suggestion such that “as determined by” is amended to “wherein the monitoring a signal quality is associated with a performance monitor.”

Therefore, Applicants respectfully submit that the rejection of Claims 1-4, 12-14, and 20 under 35 U.S.C. 112, first paragraph, has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 5-8, 15-16, and 21 - 35 U.S.C. 112, First Paragraph:**

Claims 5-8, 15-16, and 21 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement.

Examiner makes a similar rejection here as in Claim 1 with regards to Claim 5. Here, the rejected language is “as detected by a performance monitor.” In response to this rejection, Applicants have amended independent Claim 5 to change “as detected by” to “wherein the detecting is associated with a performance monitor.” Therefore, Applicants respectfully submit that the rejection of Claims 5-8, 15-16, and 21 under 35 U.S.C. 112,

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<sup>3</sup> Non-Final OA, April 27, 2007, p. 4

first paragraph, has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 1-2, 12-14, and 20 - 35 U.S.C. 103(a) – Juniper, APA, Waschka Jr., Bach *et al.*, and Hoogerbrugge**

Claims 1-2, 12-14, and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Juniper (“Juniper Networks M40 Internet Backbone Router Inter-Operating With the CIENA MultiWave Sentry DWDM System”) in view of the admitted prior art, Waschka, Jr. (U.S. Patent No. 4,449,247), Bach *et al.* (U.S. Patent No. 6,606,354), and Hoogerbrugge (“Optimizing test strategies for SONET/SDH/ATM network element manufacturing”).

Applicants respectfully submit that the combination of Juniper, APA, Waschka Jr., Back *et al.*, and Hoogerbrugge does not teach a performance monitor in each TX and RX that actively monitors bit errors and Q by adjusting a decision level threshold provided by the microprocessor. Additionally, the combination does not teach providing a bit error rate test signal from a single bit error rate test source with the bit error rate test signal operable to simultaneously test the N optical communication channels from the single bit error rate test source in conjunction with the performance monitor in each of the optical transmitters and each of the optical receivers and the diagnostics analyzer. Further, the combination does not teach that the performance monitor on each TX and RX generates transmitter diagnostic output signals and receiver diagnostic output signals. These signals are used by the diagnostics analyzer to determine which channels are faulty from the single BER test source. Applicants have amended independent Claim 1 to include these limitations to further clarify the present invention.

Juniper teaches a multi-span interoperability test between an M40 router and a CIENA SENTRY multi-channel DWDM system. Juniper does not teach performance monitors in conjunction with a diagnostics analyzer to determine which channels are faulty. Juniper is concerned with overall system BER, not individual channel BER and Q.

Juniper addresses interoperability between vendors, not a testing method for multiple channels with one source.

Waschka, Jr. teaches a system in which an operator must selectively interrogate units along a fiber link and in which sequential testing is required. Bach *et al.* teaches determining BER and signal quality of an unknown input signal. There is no suggestion of using a single source for multiple signals with performance monitors in conjunction with a diagnostics analyzer. Hoogerbrugge simply mentions burn-in testing in parallel. Hoogerbrugge does not teach Applicants novel use of performance monitors per TX and RX in conjunction with the diagnostics analyzer to use a single BER source to identify per channel faults.

Therefore, Applicants submit that the rejection of Claims 1-2, 12-14, and 20 under 35 U.S.C. 103(a) as being unpatentable over Juniper (“Juniper Networks M40 Internet Backbone Router Inter-Operating With the CIENA MultiWave Sentry DWDM System”) in view of the admitted prior art, Waschka, Jr. (U.S. Patent No. 4,449,247), Bach *et al.* (U.S. Patent No. 6,606,354), and Hoogerbrugge (“Optimizing test strategies for SONET/SDH/ATM network element manufacturing”) has now been overcome and respectfully request that this rejection be withdrawn.

**Rejection of Claims 1-2, 12-14, and 20 - 35 U.S.C. 103(a) – Juniper, APA, Waschka Jr., Bach *et al.*, Hoogerbrugge, and Bullock**

Claims 3-11, 15-19, and 21-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Juniper in view of the admitted prior art, Waschka, Jr., Bach, and Hoogerbrugge as applied to Claim 1, and in further view of Bullock *et al.* (U.S. Patent No. 5,764,651). In response to this rejection, Applicants have amended independent Claims 5 and 9 similarly to Claim 1. The amendments and arguments provided herein with regards to Claim 1 apply with equal force here.

Therefore, Applicants submit that the rejection of 3-11, 15-19, and 21-22 under 35 U.S.C. 103(a) as being unpatentable over Juniper in view of the admitted prior art, Waschka, Jr., Bach, and Hoogerbrugge as applied to Claim 1, and in further view of Bullock *et al.* has now been overcome and respectfully request that this rejection be withdrawn.

**CONCLUSION**

Applicants would like to thank Examiner for the attention and consideration accorded the present Application. Should Examiner determine that any further action is necessary to place the Application in condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, facsimile number, address, or email address provided below. It is not believed that any fees for additional claims, extensions of time, or the like are required beyond those that may otherwise be indicated in the documents accompanying this paper. However, if such additional fees are required, Examiner is encouraged to notify undersigned Counsel at Examiner's earliest convenience.

Respectfully submitted,

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